

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

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VIA VADIS, LLC AND

AC TECHNOLOGIES, S.A.,

PLAINTIFFS,

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V.

CAUSE NO. A-14-CV-808-LY

BUFFALO AMERICAS, INC.,

DEFENDANT.

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VIA VADIS, LLC AND

AC TECHNOLOGIES, S.A.,

PLAINTIFFS,

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V.

CAUSE NO. A-14-CV-810-LY

BLIZZARD ENTERTAINMENT, INC.,

DEFENDANT.

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VIA VADIS, LLC AND

AC TECHNOLOGIES, S.A.,

PLAINTIFFS,

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V.

CAUSE NO. A-14-CV-813-LY

AMAZON.COM, INC.,

DEFENDANT.

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**MEMORANDUM OPINION AND ORDER REGARDING
CLAIMS CONSTRUCTION AND ORDER ON MOTION FOR
RELIEF DUE TO VIOLATIONS OF THE SCHEDULING ORDER**

Before the court in the above-styled and numbered causes are Plaintiffs Via Vadis, LLC and AC Technologies, S.A.'s Opening Claim Construction Brief filed October 30, 2015; Defendants' Opening Brief Regarding Claim Construction filed October 30, 2015; Plaintiffs Via Vadis, LLC and AC Technologies, S.A.'s Reply Claim Construction Brief filed November 16, 2015; Defendants'

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Reply Brief Regarding Claim Construction filed November 16, 2015; the parties' Revised Joint Claim Construction Statement filed December 2, 2015; and the parties' claim-construction presentations.

Also before the court are Defendants' Opposed Motion for Relief Due to Plaintiffs' Violations of the Scheduling Order filed December 2, 2015 in Cause Nos. 1:14-CV-810-LY (Doc. #53) and 1:14-CV-813-LY (Doc. #52) and December 3, 2015 in Cause No. 1:14-CV-808-LY (Doc. #47), and Plaintiffs' Response to Defendants' Opposed Motion for Relief Due to Plaintiffs' Violations of the Scheduling Order filed December 3, 2015 in all three cases. Defendants, as referred in this Opinion and Order, are the defendants in all three causes before the court for claims construction: Buffalo Americas, Inc., Blizzard Entertainment, Inc., and Amazon.com, Inc.

The court held a claim-construction hearing on December 4, 2015. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). After considering the patents and their prosecution history, the parties' claim-construction briefs, the applicable law regarding claim construction, and argument of counsel, the court now renders its order with regard to claim construction.

I. Introduction

The court renders this memorandum opinion and order to construe the claims of United States Patent Nos. 7,904,680 ("the '680 patent"), RE40,521 ("the '521 patent"), and 8,656,125 ("the '125 patent"), all of which are entitled "Data Access and Management System as Well as a Method for Data Access and Data Management for a Computer System" (collectively "the Asserted Patents"). Plaintiff AC Technologies, S.A. is the owner and Plaintiff Via Vadis, LLC is the exclusive licensee of the Asserted Patents, which relate to the field of distributed computer systems for serving data to users. The asserted claims before the court relate generally to redundantly storing data in a client-

server system for quick access. Plaintiffs allege that Defendants infringe various claims of the Asserted Patents through the use of a peer-to-peer file-sharing system in which user computers communicate directly with other user computers and files are repetitively copied to an unlimited number of computers. Defendants contend that the Asserted Patents disclose a system in which clients access data that is redundantly stored a fixed number of times in repositories, wherein the data can be accessed by multiple clients.

II. Legal Principles of Claim Construction

Determining infringement is a two-step process. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996) (“[There are] two elements of a simple patent case, construing the patent and determining whether infringement occurred . . . ”). First, the meaning and scope of the relevant claims must be ascertained. *Id.* Second, the properly construed claims must be compared to the accused device. *Id.* Step one, claim construction, is the current issue before the court.

The court construes patent claims without the aid of a jury. *See Markman* 52 F.3d at 979. The “words of a claim ‘are generally given their ordinary and customary meaning.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. The person of ordinary skill in the art is deemed to have read the claim term in the context of the entire patent. *Id.* Therefore, to ascertain the meaning of a claim, a court must look to the claim, the specification, and the patent’s prosecution history. *Id.* at 1314–17; *Markman*, 52 F.3d at 979. Claim language guides the court’s construction of a claim term. *Phillips*, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly

instructive.” *Id.* Other claims, asserted and unasserted, can provide additional instruction because “terms are normally used consistently throughout the patent.” *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.* at 1314–15.

Claims must also be read “in view of the specification, of which they are a part.” *Markman*, 52 F.3d at 979. The specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002) (internal citations omitted). In the specification, a patentee may define a term to have a meaning that differs from the meaning that the term would otherwise possess. *Phillips*, 415 F.3d at 1316. In such a case, the patentee’s lexicography governs. *Id.* The specification may also reveal a patentee’s intent to disclaim or disavow claim scope. *Id.* Such intention is dispositive of claim construction. *Id.* Although the specification may indicate that a certain embodiment is preferred, a particular embodiment appearing in the specification will not be read into the claim when the claim language is broader than the embodiment. *Electro Med. Sys., S.A. v. Cooper Life Scis., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

The prosecution history is another tool to supply the proper context for claim construction because it demonstrates how the inventor understood the invention. *Phillips*, 415 F.3d at 1317. A patentee may also serve as his own lexicographer and define a disputed term in prosecuting a patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004). Similarly, distinguishing the claimed invention over the prior art during prosecution indicates what a claim does not cover. *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988). The doctrine of prosecution disclaimer precludes a patentee from recapturing a specific meaning that was previously disclaimed during prosecution. *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323

(Fed. Cir. 2003). A disclaimer of claim scope must be clear and unambiguous. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002).

Although, “less significant than the intrinsic record in determining the legally operative meaning of claim language,” the court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the court understand the underlying technology and the manner in which one skilled in the art might use a claim term, but such sources may also provide overly broad definitions or may not be indicative of how a term is used in the patent. *See id.* at 1318. Similarly, expert testimony may aid the court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.* Extrinsic evidence may be useful when considered in the context of the intrinsic evidence, *id.* at 1319, but it cannot “alter a claim construction dictated by a proper analysis of the intrinsic evidence,” *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH*, 386 F.3d 1133, 1139 (Fed. Cir. 2004).

III. Discussion

A. Agreed Constructions

The parties agree to the construction of five claim terms. The court adopts the agreed construction of those claim terms as listed in the table below.¹

¹ Throughout, the **bolded** claim terms indicate the court’s adopted construction.

Claim Term/Phrase	Adopted Agreed Construction
“user” [’521 and ’125 Patents]	a computer or a component of a computer system
“data transmission means [for a data transmission between the data storage means and the computer unit” [’521 Patent]	Function: data transmission Structure: electrically conductive connections; bus systems; networks; wired or wireless (mobile) telephone networks; the Internet
“shifting” [’521 Patent]	data is copied to a new location and no longer available at one of the previous locations
“shifting redundantly stored data independent of an access of the computer unit as a function of the determined prespecified parameters of data transmission” [’521 Patent]	No construction necessary
“data stored . . . in a redundant manner”/ “piece . . . stored . . . in a redundant manner” [’521 ’680, and ’125 Patents]	existing in two or more data storage means at the same time

B. *Disputed Terms*

The parties dispute the construction of 19 terms. Each disputed term is discussed separately.

1(a). “data storage means”

The parties’ proposed constructions of this term, as used in claims 1, 4, 11, 13, 15, 30, 31, 33, 40, and 43 of the ’521 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
<p>Means-Plus-Function</p> <p><u>Function:</u> data storage</p> <p><u>Structure:</u> cells; control units; individual memory areas; clusters; cluster pools/compounds; memory units; conventional storage means; non-volatile memories; random access memories</p>	<p>Means-Plus-Function</p> <p><u>Function:</u> data storage</p> <p><u>Structure:</u> one or more memory cells, each cell storing: 1) one field of information; and 20 the other locations within the system where copies of the cell are located; where the information in every cell is copied the same number of times throughout the system</p>

The parties' agree that this term is subject to and governed by Title 35 of the United States Code, Section 112(f).² The parties also agree that the term is written in the means-plus-function format and the recited function is **data storage**. The parties disagree with respect to the corresponding structure.

Plaintiffs argue that they have identified the structure necessary to perform the function as disclosed in the specification, whereas Defendants have included numerous ancillary implementation details pertinent to a specific embodiment that are unnecessary to performance of the agreed-upon function. *See Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1257–58 (Fed. Cir. 1999). To support its construction, Plaintiffs use language from the specification that states, “The data managing means MEM1, MEM2, MEM3 can be conventional storage means, e.g. non-volatile memories or random access memories, but also special means which e.g. do not only store but also process data and which can therefore not provide the central processing unit CPU with data without

² The America Invents Act replaced Section 112, paragraph 6 with Section 112(f) for all patent applications filed after September 15, 2012. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.). To avoid confusion, the court will refer to subsections consistent with the current version of the statute. Throughout this opinion and order, the court will refer to this provision simply as “Section 112(f).”

restrictions and at any time.” ’521 Patent, 10:29-34. *See also* ’521 Patent, 7:26-35 (describing clusters, cells, and fields). Plaintiffs assert that because Defendants’ proposed construction of the structure is directed to a function of cells in a particular embodiment, including copying information in every cell, Defendants have violated the fundamental basis for construing a phrase under Section 112(f).

Defendants argue that the specification identifies the cell as the functional structure, stating that “[a] cell Z is the smallest unit for data storage which stores exactly one field F.” ’521 Patent, 7:26–27. Defendants further argue that the ’521 Patent expressly states that it is “essential” that the data storage means store each piece of data the same number of times throughout the system. ’521 Patent, 8:65-9:2. Defendants assert that Plaintiffs’ proposed construction fails to include this essential element of the invention and merely discloses a functional structure along with superfluous structures that do not clarify the claim language.

The “means-plus-function” technique of claim drafting is a “convenience” for patentees that allows the expression of claim limitations in functional terms “without requiring the patentee to recite in the claims all possible structures” that could be used as a means in the invention. *Medical Instrumentation & Diags. Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2003); *see also* 35 U.S.C. § 112(f). In return for this drafting convenience, patentees must disclose, in the specification, a corresponding structure for performing the claimed function. *See Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1318 (Fed. Cir. 2012). “If the specification is not clear as to the structure that the patentee intends to correspond to the claimed function, then the patentee has not paid the price but is rather attempting to claim in functional terms unbounded by any reference to structure in the specification.” *Med. Instrumentation*, 344 F.3d at 1211.

The specification provides that “[a]n essential characteristic of the invention is that each cell in the cluster compound CV is available in a redundant manner, i.e. nm times in nm clusters C. Thus, each field F is nm times stored in these cells Z, and each of these cells Z is referred to as mirror SP with respect to the field F stored therein.” ’521 Patent, 8:65-9:2. When a patent application describes a feature as an essential part of the invention, the claims must each be construed to contain that feature; otherwise, the claims are invalid for lack of written description. *See Retractable Techs., Inc. v. Becton Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011); *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007). Accordingly, the court concludes the disclosed structure is **one or more memory cells, each cell storing: (1) one field of information; and (2) the other locations within the system where copies of the cell are located; where the information in every cell is copies the same number of times throughout the system.**

- 1(b) “second data storage means for storing data, [that need not store the complete file stored in the first means at a given point in time, wherein at least one piece is stored in a redundant manner in the at least two second data storage means]”

The parties agree that this term is subject to and governed Section 112(f). The parties’ proposed constructions of this term, as used in claims 5 and 6 of the ’680 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
<p>Means-Plus-Function</p> <p><u>Function:</u> data storage</p> <p><u>Structure:</u> cells; control units; individual memory areas; clusters; cluster pools/compounds; memory units; conventional storage means; non-volatile memories; random access memories</p>	<p>Means-Plus-Function</p> <p><u>Function:</u> data storage</p> <p><u>Structure:</u> one or more memory cells, each cell storing: 1) one field of information; and 20 the other locations within the system where copies of the cell are located; where the information in every cell is copied the same number of times throughout the system</p>

Because the parties agree that this claim limitation should be construed the same as 1(a) “data storage means,” the court concludes that the recited function is **data storage** and the disclosed structure is **one or more memory cells, each cell storing: (1) one field of information; and (2) the other locations within the system where copies of the cell are located; where the information in every cell is copies the same number of times throughout the system.**

2. “data storage [unit/device]”

The parties’ proposed constructions of this term, as used in claims 1-5 and 7-15 of the ’680 Patent and claims 1-6 and 9-13 of the ’125 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
No construction necessary	<p>Means-Plus-Function</p> <p><u>Function:</u> data storage</p> <p><u>Structure:</u> one or more memory cells, each cell storing: 1) one field of information; and 20 the other locations within the system where copies of the cell are located; where the information in every cell is copied the same number of times throughout the system</p>

The parties do not agree that this term is subject to and governed Section 112(f). Plaintiffs assert that the term is readily understandable to a jury and need not be construed. Defendants argue that because the term uses functional language to describe the limitation, along with nonce words such as “unit” and “device” that do not connote a specific structure to a person of ordinary skill in the art at the time of the application, the term must be construed pursuant to Section 112(f). Defendants further argues that because the limitations perform the same function as “data storage means,” these limitations should be construed the same as “data storage means.”

The court agrees with Defendants. The Federal Circuit has rejected the argument that replacing the word “means” with “unit” or “device” takes the limitations outside the bounds of Section 112(f). *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (“Generic terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they ‘typically do not connote sufficiently definite structure’ and therefore may invoke [Section 112(f)].”) (internal citations omitted). Accordingly, the court concludes that the recited function is **data storage** and the disclosed structure is **one or more memory cells, each cell storing: (1) one field of information; and (2) the other locations within the system where copies of the cell are located; where the information in every cell is copies the same number of times throughout the system.**

3. “first means for storing at least one complete file, [each file including a plurality of individual pieces, the pieces containing parts of the files]”

The parties’ agree that this term is subject to Section 112(f). The parties’ proposed constructions of this term, as used in claims 5 and 6 of the ’680 Patent, are listed in the following table:

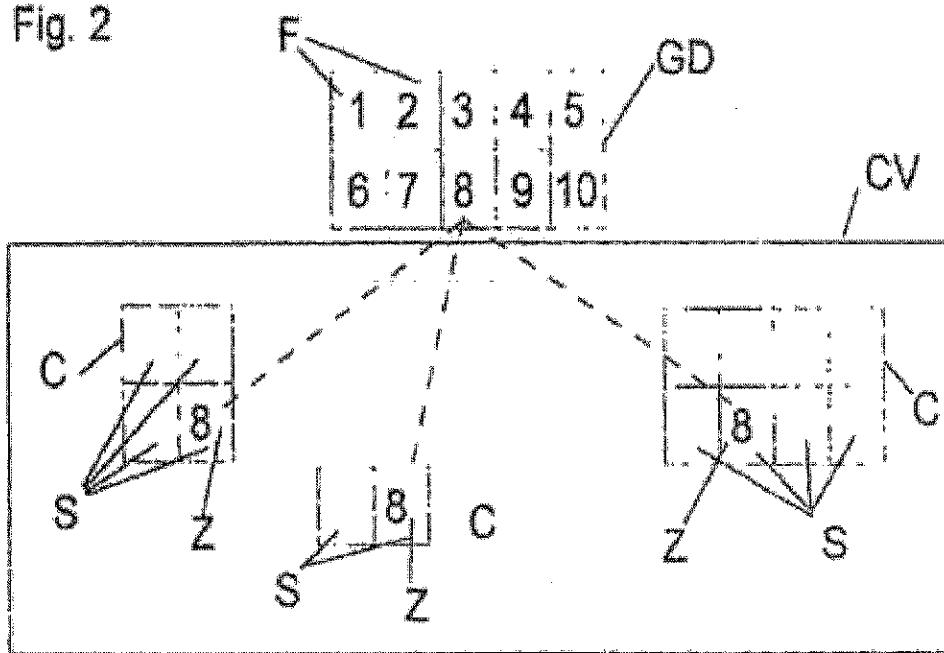
Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
<p>Means-Plus-Function</p> <p><u>Function</u>: storing at least one complete file</p> <p><u>Structure</u>: cells; control units; individual memory area; clusters; cluster pools/compounds; memory units; conventional storage means; non-volatile memories; random access memories</p>	<p>Means-Plus-Function</p> <p><u>Function</u>: storing at least one complete file</p> <p><u>Structure</u>: none—the term is indefinite</p>

The parties also agree that the term is written in the means-plus-function format, and that the recited function is **storing at least one complete file**. The parties disagree with respect to the corresponding structure.

Defendants assert that there is no corresponding structure in the ’680 Patent specification for storing a complete file. Defendants further note that the Asserted Patents never use the word “file” other than in the later added claims of the ’680 and ’125 Patents.

Plaintiffs argue that Figure 2 from the ’680 Patent specification depicts the storage of the “entire data quantity,” which a person of ordinary skill in the art would understand to mean that the file corresponds to the entire date quantity (denoted as “GD” in Figure 2) and pieces of the file are referred to with the symbol F.

Fig. 2



'680 Patent, Figure 2.

Using the means-plus-function form, the applicant must provide in the specification a description of structure that is “clearly linked or associated with the claimed function.” *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1363 (2012) (quoting *Medical Instrumentation & Diagnostics Corp. v. Elektra AB*, 344 F.3d 1205, 1219 (Fed. Cir. 2003)). Without this clear linkage the claim is indefinite and invalid. *Ergo Licensing*, 673 F.3d at 1363. “The correct inquiry is to look at the disclosure of the patent and determine if one of skill in the art would have understood that disclosure to encompass” a linkage of a disclosed structure to the recited function. *Medical Instrumentation*, 344 F.3d at 1212.

The patent specification states that “[t]he entire data quantity GD which is used in the context of the invention is divided into individual data subsets which are referred to as field F.” Plaintiffs’ expert, Gregory W. Bosch, contends that the “entire quantity GD” is the “one complete field” of the

claim. Plaintiffs' expert's testimony alone cannot be used to create a linkage where there is none in the text of the Asserted Patents. *See Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1331–32 (Fed. Cir. 2003) (expert testimony "cannot be used to vary the plain language of the patent document"). The court can find nothing in the specifications of the Asserted Patents that discusses storage of a file or connects file storage in any way with the memory cells described in the Asserted Patents. The fact that the memory cells could be used to store a file, or Plaintiffs' claim that persons of ordinary skill reading the patents would recognize that memory cells could be used to store a file, are both irrelevant under the law. *See Medical Instrumentation & Diagnostics Corp.*, 344 F.3d at 1210–11; *see also Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1385 (Fed. Cir. 2009). The patent specifications themselves must disclose the linkage. Because no linkage is disclosed, the court finds no structure corresponding to the recited function.

Therefore, the court concludes that the term "first means for storing at least one complete file, [each file including a plurality of individual pieces, the pieces containing parts of the files]" is **indefinite**.

4. "the first data storage means"

The parties' agree that this term is subject to Section 112(f). The parties' proposed constructions of this term, as used in claim 5 of the '680 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
<p>Means-Plus-Function</p> <p><u>Function</u>: storage of at least one complete file</p> <p><u>Structure</u>: cells; control units; individual memory area; clusters; cluster pools/compounds; memory units; conventional storage means; non-volatile memories; random access memories</p>	<p>Means-Plus-Function</p> <p><u>Function</u>: data storage</p> <p><u>Structure</u>: a client computer, for example an Internet Service Provider, personal computer, or network computer</p> <p>But the term is indefinite for lacking antecedent basis</p>

The court agrees with Defendants' recitation of function that incorporates the precise claim language. The court concludes the construction of the function to be: **data storage**.

The parties dispute whether or not the term is indefinite for lacking an antecedent basis for “the” first data storage means. Defendants argue “*the* first data storage means,” found only in the last element of claim 5 of the ’680 Patent, is not defined elsewhere in the claim and therefore lacks antecedent basis. Defendants contend that the two terms from claim 5 that are closest in phrasing are “first means for storing at least one complete file” (’680 pat. at col. 26:60), and “two second data storage means for storing data” (*id.* at col. 26:63–65). Defendants assert that a person of ordinary skill in the art would be unable to determine which, if either, of these two earlier means-plus-function terms are referred to by “the first data storage means.” Thus, Defendants argue, the lack of antecedent basis and inability of a person of ordinary skill in the art to determine to what the term is referring renders the limitation indefinite. *See Nautilus v. Biosig Instruments, Inc.*, 572 U.S. ___, 134 S. Ct. 2120, 2123–24 (2014) (claims are indefinite if they “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention”).

Plaintiffs assert that antecedent basis in claim 5 is manifest: “the first data storage means” derives antecedent basis from “first means for storing at least one complete file.” Plaintiffs argue that the sole word that differs between them is “data,” and Defendants cannot be heard to suggest that storage by the recited means is storage of anything other than data. The flaw in Plaintiffs’ argument, however, is that the term “first means for storing at least one complete file” is indefinite. Therefore, the court concludes that the term “the first data storage means” is **indefinite**.

5. “computer unit”

The parties’ proposed constructions of this term, as used in claims 1, 4, 11, 12, 14, 15, 21, 22, 30, 33, 40, 41, and 43 of the ’521 Patent; claims 1-4, 7, 8, 10, 11, 13, and 14 of the ’680 Patent; and claims 1, 2, 6, 8, 9, and 13 of the ’125 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
No construction necessary	“a client computer, for example, an internet service provider, personal computer, or network computer”

Plaintiffs argues that the term would be understood by a person of ordinary skill in the art and should be given its plain and ordinary meaning. Plaintiffs’ expert defined a person of ordinary skill in the art as a person with an undergraduate degree in computer science, computer engineering, or a related field, and would have had a few years of experience working in the field of data access and management and distributed computer systems, or would have had an equivalent level of experience.

Defendants assert that their proposed construction is based upon the description of the computer unit contained within the patents themselves, which sometimes refer to the computer until interacting with the memory cells as a “client” and provide specific examples of client devices

included in Defendants' proposed construction. In reply, Plaintiffs argue that Defendants seek to improperly limit the patent claims to examples in the specification. *See Phillips*, 415 F.3d at 1323 (holding that although claim terms are understood in light of specification, claim construction must not import limitations from specification into claims). The court agrees with Plaintiffs. A court may depart from the plain and ordinary meaning of a claim term in only two instances: lexicography and disavowal. *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). Nothing in the specification indicates that the patentee acted as his own lexicographer to define the term "computer unit" in a specific way. Therefore, to conclude that the term requires construction beyond its plain and ordinary meaning, the court would need to find "that the specification [or prosecution history] makes clear that the invention does not include a particular feature, or is clearly limited to a particular form of the invention." *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001); *see also Hill-Rom*, 755 F.3d at 1372.

[A]bsent some language in the specification or prosecution history suggesting that the [limiting feature] is important, essential, necessary, or the "present invention," there is no basis to narrow the plain and ordinary meaning of the term There are no magic words that must be used, but to deviate from the plain and ordinary meaning of a claim term to one of skill in the art, the patentee must, with some language, indicate a clear intent to do so in the patent.

Hill-Rom, 755 F.3d at 1373.

The court finds that the specification does not support a construction of this term in a way other than the plain and ordinary meaning of the words as they would be understood by a lay person, much less one of ordinary skill in the art. The court concludes that **no construction of the claim term is necessary.**

6(a). “prespecified parameters of the data transmission” / “prespecified parameters” / “prespecified parameters for data transmission” / “prespecified paramenters of data transmission” / “predetermined parameters [for data transmissions]”

The parties’ proposed constructions of this term, as used in claims 1, 15, 30, and 43 of the ’521 Patent and claims 4-7 and 11-14 of the ’125 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
“prespecified/predetermined values, variables, characteristics or other parameters relating to the performance of data transmission”	<p>“Prespecified” and “predetermined” are indefinite.</p> <p>Remainder of the terms (i.e. “parameters [of/for] [the] data transmission”): “duration of transmission, fault rate, duration of data processing operations of individual data storage means prior to transmission, transmission quality, transmission rate, load, computing performance, network performance, or other performance measures”</p>

Defendants assert that the words “prespecified” and “predetermined,” with respect to a parameter of data transmission, are fatally unclear, because the patents do not explain when, how, or by whom a parameter is specified or determined such that it is “prespecified” or “predetermined.” Plaintiffs argue that Defendants have failed to articulate why the claimed limitation that a parameter is prespecified or predetermined leads to a conclusion that all such terms are indefinite, noting that such terms are readily understood by one of skill in the art commonly used in the field of computing technology. *Cf. IGT v. Bally Gaming Intern., Inc.*, C. 1119 (Fed. Cir. 2011) (construing “predetermined event” and “predefined event” as “chosen in advance” and rejecting infringer’s claim of indefiniteness). In reply, Defendants argue that even if “prespecified” and “predetermined” imply a temporal aspect, unlike *IGT*, the context of the specification and prosecution history in this case

provide no guidance as to what event, action, or condition in advance of which the parameters of data transmission must be chosen in order to satisfy the claim. The court agrees.

“A claim is not indefinite merely because parties disagree concerning its construction. An accused infringer must thus demonstrate by clear and convincing evidence that one of ordinary skill in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecution history, and the knowledge in the relevant art.” *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010). In this case, the context of the specification is not an event in time, but parameters of transmission that are “detected,” and, as a function of the parameters, data is stored and storage means are accessed. *See* ’521 Patent, at claim 1. However, there is no explanation in the text of the Asserted Patents from which to determine what event, action, or condition in advance of which the parameters of data transmission must be chosen in order to satisfy the claim. As such, the Asserted Patents provide no guidance for “context based interpretation” of how “prespecified” and “predetermined” modify the meaning of a parameter of data transmission. *See Atlas IP, LLC v. Meditronic, Inc.*, 809 F.3d 599, 608 (Fed. Cir. 2015). Therefore, the court concludes that the terms “prespecified” and “predetermined” are **indefinite**.

The court will address the remainder of the terms in 6(a) in the discussion of 6(b) to follow.

6(b). “data transmission performance”

The parties’ proposed constructions of this term, as used in claims 1, 3, 5, 7, 8, 10, 11, 13, and 14 of the ’680 Patent and claims 1, 2, 8, and 9 of the ’125 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
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“duration of transmission, fault rate, duration of data processing operations of individual data storage means prior to transmission, transmission quality, transmission rate, computing performance, network performance, or other performance measures”	“duration of transmission, fault rate, duration of data processing operations of individual data storage means prior to transmission, transmission quality, transmission rate, load computing performance, network performance, or other performance measures”
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The parties dispute the inclusion of “load” in the proposed constructions. Defendants assert that “load” is a parameter or measure of “data transmission performance,” noting that the prosecution history equates “workload” with “parameters of transmission.” Plaintiffs correctly point out that “load” does not appear in the intrinsic record, noting that Defendants have failed to identify a definition of “load.” This court agrees. Accordingly, the court concludes the construction for the terms “parameters of data transmission” and “data transmission performance” to be: **duration of transmission, fault rate, duration of data processing operations of individual data storage means prior to transmission, transmission quality, transmission rate, computing performance, network performance, or other performance measures.**

7(a). “means for detecting prespecified parameters of the data transmission between the data storage means and the computer unit [with the data being preferably stored in a redundant manner in the data storage means as a function of said detected prespecified parameters, and with the computer unit accessing one of the data storage means as a function of said prespecified parameters] ”

The parties’ proposed constructions of this term, as used in claim 1 of the ’521 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
Means-Plus-Function: This clause is a single	Means-Plus-Function: This clause contains

<p>means-plus-function element and should be construed in context.</p> <p><u>Function:</u> detecting prespecified parameters of the data transmission between the data storage means and the computer unit</p> <p><u>Structure:</u> A network of computers programmed to perform the following algorithm:</p> <ol style="list-style-type: none"> 1. Storing data fields in cells depending on determined prespecified parameters of data transmission, wherein data in cells are stored in two or more storage locations at the same time depending on the prespecified parameters. 2. Determining or checking the cell's applicable parameters of data transmission with other cells using and/or in response to at least one of: (1) pseudoreliable messages; (2) find operation; (3) read operation; (4) write operation; (5) mirror operation; and (6) shift operation. 3. Wherein said determining or checking occurs periodically based on time intervals or subsequent to specified actions. 4. Accessing the store data based upon the determined parameters of data transmission. 	<p>multiple claims limitations (with other limitation, such a "preferably," "prespecified," "predetermined," and "as a function of" addressed elsewhere).</p> <p><u>Function:</u> detecting prespecified parameters of the data transmission between the data storage means and the computer unit</p> <p><u>Structure:</u> none—at best, the specification discloses a counter or time, which measures only one parameter, not plural parameters</p>
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The parties' agree that this term is subject to and governed by Section 112(f). The parties also agree that the term is written in the means-plus-function format and that the recited function is **detecting prespecified parameters of the data transmission between the data storage means and the computer unit.** The parties disagree with respect to the corresponding structure.

Defendants assert that the means-plus-function limitation is indefinite because no corresponding structure is disclosed, arguing that the Asserted Patents at best disclose structure that can detect just one such measure or parameter—duration—and therefore the claim term is indefinite for lack of a disclosed structure able to detect more than one parameter. Plaintiffs argue that a person of ordinary skill in the art would understand that the algorithm in Plaintiffs' proposed construction is explicitly disclosed in the specification for performing the function of detecting prespecified parameters of the data transmission between the data storage means and the computer unit. The court agrees.

"Absolute clarity is not required to find a claim term definite. This court has held that a claim term may be definite even when discerning the meaning is a 'formidable [task] and the conclusion may be one over which reasonable persons will disagree.'" *Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1373 (Fed. Cir. 2011) (quoting *Source Search Techs., LLC v. LendingTree, LLC*, 588 F.3d 1063, 1076 (Fed. Cir. 2009), in turn citing *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001)). "[A] patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement." *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1384 (Fed. Cir. 2005) (quotation marks omitted).

Accordingly, the court concludes that the recited function is **detecting prespecified parameters of the data transmission between the data storage means and the computer unit** and the disclosed structure is: **A network of computers programmed to perform the following algorithm:** **1. Storing data fields in cells depending on determined parameters of data transmission, wherein data in cells are stored in two or more storage locations at the same time depending on the parameters.** **2. Determining or checking the cell's applicable parameters**

of data transmission with other cells using and in response to at least one of: (a) pseudoreliable messages; (b) find operation; (c) read operation; (d) write operation; (e) mirror operation; and (f) shift operation. 3. Wherein said determining or checking occurs periodically based on time intervals or subsequent to specified actions. 4. Accessing the store data based upon the determined parameters of data transmission.

7(b). “[the data storage means comprising] second means for detecting prespecified parameters for data transmissions between said data storage means”

The parties agree that this term is subject to and governed Section 112(f). The parties' proposed constructions of this term, as used in claim 1 of the '521 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
<p>Means-Plus-Function</p> <p><u>Function</u>: detecting prespecified parameters of the data transmission between the data storage means and the computer unit</p> <p><u>Structure</u>: A network of computers programmed to perform the following algorithm:</p> <ol style="list-style-type: none"> 1. Storing data fields in cells depending on determined prespecified parameters of data transmission, wherein data in cells are stored in two or more storage locations at the same time depending on the prespecified parameters. 2. Determining or checking the cell's applicable parameters of data transmission with other cells using and/or in response to at least one of: (1) pseudoreliable messages; (2) find operation; (3) read operation; (4) write operation; (5) mirror operation; and (6) shift operation. 3. Wherein said determining or checking occurs periodically based on time intervals or subsequent to specified actions. 4. Accessing the store data based upon the determined parameters of data transmission. 	<p>Means-Plus-Function</p> <p><u>Function</u>: detecting prespecified parameters of the data transmission between the data storage means</p> <p><u>Structure</u>: none—there is no disclosure in the specification measuring transmission parameters between the data storage means; at best, the specification discloses a counter or time, which measures only one parameter between the computer unit and data storage means, not plural parameter between the data storage devices.</p>

The claim limitation should be construed the same as 7(a); the court concludes that the recited function is **detecting prespecified parameters of the data transmission between the data storage means and the computer unit** and the disclosed structure is: **A network of computers**

programmed to perform the following algorithm: 1. Storing data fields in cells depending on determined parameters of data transmission, wherein data in cells are stored in two or more storage locations at the same time depending on the parameters. 2. Determining or checking the cell's applicable parameters of data transmission with other cells using and in response to at least one of: (a) pseudoreliable messages; (b) find operation; (c) read operation; (d) write operation; (e) mirror operation; and (f) shift operation. 3. Wherein said determining or checking occurs periodically based on time intervals or subsequent to specified actions. 4. Accessing the store data based upon the determined parameters of data transmission.

8(a). “controller to enable data transmission between the data storage units and the computer unit”

The parties' proposed constructions of this term, as used in claims 1 and 3 of the '680 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
Not 35 U.S.C. § 112(f) “A device that other devices rely on to enable data transmission between the data storage units and the computer unit.”	35 U.S.C. § 112(f) <u>Function</u> : to enable and control data transmission between the data storage units and the computer unit <u>Structure</u> : None—the term is indefinite

The parties do not agree that this term is subject to and governed Section 112(f). Plaintiff asserts that the term is not expressed as a means-plus-function limitation, arguing that one of ordinary skill in the art would be familiar with the use of the term “controller,” in the context of Claims 1 and 3 of the '680 Patent, and would understand the controller function in enabling data transmission

between the data storage units and the computer unit. *See generally AutoMed Technologies, Inc. v. Micrfil, LLC*, 244 Fed. Appx. 354, 357 (Fed. Cir. July 16, 2007) (construing “controller” without applying means-plus-function treatment).

A claim limitation that includes the word “means” will invoke a rebuttable presumption that Section 112(f) applies. *See Personalized Media Communications, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 703–07 (Fed. Cir. 1998). However, a claim term that does not use “means” will trigger a rebuttable presumption that Section 112(f) does *not* apply. *Id.* at 704. *See also Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (noting that court seldom holds limitation without recitation of means is means-plus-function limitation). In this case, the claims at issue do not use means-plus-function language, thereby triggering the rebuttable presumption that Section 112(f) does not govern. Thus, to determine whether the claim term recites sufficient structure, the court must examine whether it has an understood meaning in the art. *Citrix Online, LLC*, 792 F.3d at 1349 (citing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996); *see also Watts v. XL Sys., Inc.*, 232 F.3d 877, 880–81 (Fed. Cir. 2000). “When a claim term lacks the word ‘means,’ the presumption can be overcome and [Section 112(f)] will apply if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* (quoting *Watts*, 232 F.3d at 880).

Defendants are unable to overcome the presumption, arguing only that the word “controller” is a nonce word, and that one of ordinary skill in the art would not have understood the term to imply or require any structure. The court disagrees. Moreover, the dictionary definitions of “controller” proffered by Plaintiffs show that an one of ordinary skill in the art would understand this term to have

an ordinary meaning. Therefore, the court adopts Plaintiffs' construction: **A device that other devices rely on to enable data transmission between the data storage units and the computer unit.**

8(b). "control means for enabling data transmission between the second data storage means and the first means"

The parties' proposed constructions of this term, as used in claim 5 of the '680 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
<p>35 U.S.C. § 112(b)</p> <p><u>Function</u>: enabling data transmission between the second data storage means and the first means</p> <p><u>Structure</u>: a computer programmed to issue copy, ship, read, write and/or mirror commands</p>	<p>35 U.S.C. § 112(b)</p> <p><u>Function</u>: to enable data and control data transmission between the second data storage means and the first means</p> <p><u>Structure</u>: None—the term is indefinite</p>

Plaintiffs contend that the function is derived from the language of the claims, arguing that Defendants erroneously insert the word "control" despite the fact that it is not in the detail of the transmission itself as stated in the claim. The court agrees. With regard to structure, Plaintiffs identify algorithms in the specification corresponding to their proposed claimed function. *See '680 Patent, 21:12-24:16.*

Structure disclosed in the specification qualifies as "corresponding structure" if the intrinsic evidence clearly links or associates that structure to the function recited in the claim. *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012) (citing *B. Braun Med., Inc. v. Abbott Labs.*, 124

F.3d 1419, 1424 (Fed. Cir. 1997)). The disclosure also must be of “adequate” corresponding structure to achieve the claimed function. *Id.* at 1311–12 (citing *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc)). If a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim, a means-plus-function clause is indefinite. *Id.* at 1312 (citing *AllVoice Computing PLC v. Nuance Commc’ns, Inc.*, 504 F.3d 1236, 1241 (Fed. Cir. 2007)). The court finds that the structure disclosed in the specification adequately corresponds to the function recited in the claim. Accordingly, the court concludes that the recited function is **enabling data transmission between the second data storage means and the first means** and the disclosed structure is a **computer programmed to issue copy, shift, read, write or mirror commands**.

9. “preferably”

The parties’ proposed constructions of this term, as used in claim 1 of the ’521 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
“with preference to”	Indefinite

Defendants argue that use of the term “preferably” renders the claim indefinite because it precludes persons of ordinary skill in the art from determining what falls within and outside of the claim. Plaintiffs argue that Claim 1 must be construed in context, as a whole, *see Ultimax Cement Manufacturing Corp. v. CTS Cement Manufacturing Corp.*, 587 F.3d 1339, 1347 (Fed. Cir. 2009), noting that the specification provides further support that one of ordinary skill in the art would understand that data is redundantly stored in the data storage means, but the two or more locations

the data is stored at the same time is “[p]referably . . . carried out as a function of the data transmission parameters.” *See* ’521 Patent, 4:61-67. The court agrees and adopts Plaintiffs’ construction: **with preference to.**

10. “a set of instructions for . . . receiving, in the at least one data storage device, [at least one piece of data/a second piece of data] stored by [a/the at least one] stored by [a/the at least one] computer unit in a redundant manner in at least two data storage devices as a function of a measured data storage device and the at least one computer unit ”

The parties’ proposed constructions of this term, as used in claims 1, 2, 8, and 9 of the ’125 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
No construction necessary	“instructions that discriminate and only receive data that satisfies the rest of this limitation”

Defendants argue that the claim term refers to a set of instruction for performing a specific function in the data-storage devices of the inventive system and that Defendants’ construction of this limitation calls for the instructions to perform the functions spelled out in the claim. Plaintiffs assert that Defendants’ proposed construction is incorrect because it includes a negative limitation that does not exist in the claim or by the intrinsic record. *See Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 945 (Fed. Cir. 1990). The court agrees. A person of ordinary skill in the art would find no reason that an operable system could not use the same instructions to receive data that does not meet the stated limitation. The court therefore concludes that **no construction of the claim term is necessary.**

11. “[performing an action] **as a function of** [the prespecified parameters/predetermined parameters/data transmission performance]” or “[performing an action] **based on** [the prespecified parameters/predetermined parameters/data transmission performance]”

The parties’ proposed constructions of this term, as used in claims 1 and 30 of the ’521 Patent; claims 1, 3, 5, 7, 8, 10, 11, 13, 14 of the ’680 Patent; and claims 1, 2, 8, and 9 of the ’125 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
No construction necessary	Indefinite

Plaintiffs argue that the terms “as a function of” or “based on” are general terms referencing that the specified action is taken in a manner through software that takes into consideration the parameters or data-transmission performance, and that a precise mathematical relationship need not be claimed. Defendants assert that the many claims that recite that some action is performed “as a function of” or “based on” data-transmission parameters or data-transmission performance are indefinite because it is not possible to determine which of several possible meanings is correct. Thus, Defendants argue, the terms “fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *See Nautilus v. Biosig Instruments, Inc.*, 572 U.S. ___, 134 S. Ct. 2120, 2124 (2014).

The court finds that the claim is not indefinite. A changing variable or factor, as indicated by the use of the words “based on” and “as a function of,” intends to capture a range of relationships rather than a specific one, which is widely accepted in patent law. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (“the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such

cases involves little more than the application of the widely accepted meaning of commonly understood words"). Nothing in the intrinsic record requires that a specific action be taken. The specification does not support a construction of this term in a way other than the plain and ordinary meaning of the words as they would be understood by a lay person, much less one of ordinary skill in the art. The court therefore concludes that **no construction of the claim term is necessary.**

12(a). “the data storage units copy pieces that are redundantly stored in the system from one of the data storage units to another of the data storage units independently of an access of the computer unit based on the data transmission performance between the data storage units”

The parties’ proposed constructions of this term, as used in claims 1 and 3 of the ’680 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
No construction necessary; and “stor[ed] in two or more data storage means at the same time” “without depending on an access of the [at least one] computer unit”	Indefinite

Defendants assert that the claim is indefinite because it is not clear if the clause “based on the data transmission performance between the data storage units” modifies “copy,” “redundantly stored,” or “access of the computer unit.” Defendants further argue that the specification does not support any of the possible interpretations, such that a person having ordinary skill in the art at the time of the invention would not have been able to determine which of these three possible interpretations is correct.

The court concludes that the claim is not indefinite. After reviewing the disputed claim language in light of the intrinsic record, it is clear that the clause “based on the data transmission performance between the data storage units” would be understood to modify “copy” by a lay person, much less one of ordinary skill in the art. The court therefore concludes that **no construction of the claim term is necessary.**

12(b). “copies data which is redundantly stored in the system independent of an access of the computer unit as a function of the detected prespecified parameters of data transmission between the data storage means”

The parties’ proposed constructions of this term, as used in claim 1 of the ’521 Patent, are listed in the following table:

Plaintiffs’ Proposed Construction	Defendants’ Proposed Construction
“copies data with is stor[ed] in two or more data storage means at the same time without depending on the access of the computer unit”	Indefinite

Defendants provide no additional argument regarding their claim that the term is indefinite. Plaintiffs argue that a person of ordinary skill would find the term readily understandable. The court agrees and finds the claim is not indefinite. The court adopts Plaintiffs’ construction: **copies data which is stored in two or more data storage means at the same time without depending on the access of the computer unit.**

12(c). “the second data storage means copy pieces that are redundantly stored in the system from one of the second data storage means to another of the second data storage means independently of an access of the first data storage means based on the measured data transmission performance between the second data storage means ”

The parties' proposed constructions of this term, as used in claim 5 of the '680 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
No construction necessary; and “stor[ed] in two or more data storage means at the same time” “without depending on the access of the computer unit”	Indefinite

The court finds that the claim is not indefinite based upon the same reasoning addressed in 12(a). The court therefore concludes that **no construction of the claim term is necessary**.

12(d). “send[ing] from the [at least one] data storage device to the other data storage device a copy of the received [second] piece of data for redundant storage independently of an access of the computer unit as a function of the measured data transmission performance between the data storage devices”

The parties' proposed constructions of this term, as used in claims 7, 8, 10, 11, 13, and 14 of the '680 Patent and claims 1, 2, 8, and 9 of the '125 Patent, are listed in the following table:

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
No construction necessary; and “without depending on the access of the computer unit”	Indefinite

Defendants assert that the claim is indefinite because it is not possible to tell what is being modified by the clause “as a function of the measured data transmission performance between the data storage devices.” Defendants further argue that because the specification does not disclose

“measuring data transmission performances between data storage devices,” a person of ordinary skill in the art would be unable to determine which of many possible interpretations of the clause applies.

The court concludes that the claim is not indefinite. After reviewing the disputed claim language in light of the intrinsic record, it is clear that the clause “as a function of the measured data transmission performance between the data storage devices” would be understood to modify “send[ing]” by a lay person, much less one of ordinary skill in the art. The court therefore concludes that **no construction of the claim term is necessary**.

C. Summary Table of Agreed and Disputed Terms

Term/Phrase	Court's Construction
<p>“data storage means”</p> <p>[’521 Patent, Claims 1, 4, 11, 13, 15, 30, 31, 33, 40, 43]</p>	<p>Function: data storage</p> <p>Structure: one or more memory cells, each cell storing: (1) one field of information; and (2) the other locations within the system where copies of the cell are located; where the information in every cell is copies the same number of times throughout the system</p>
<p>“second data storage means for storing data, [that need not store the complete file stored in the first means at a given point in time, wherein at least one piece is stored in a redundant manner in the at least two second data storage means]”</p> <p>[’680 Patent, Claims 5, 6]</p>	<p>Function: data storage</p> <p>Structure: one or more memory cells, each cell storing: (1) one field of information; and (2) the other locations within the system where copies of the cell are located; where the information in every cell is copies the same number of times throughout the system</p>

Term/Phrase	Court's Construction
<p>“data storage [unit/device]”</p> <p>[’680 Patent, Claims 1-5, 7-15 and ’125 Patent, Claims 1-6, 9-13]</p>	<p><u>Function:</u> data storage</p> <p><u>Structure:</u> one or more memory cells, each cell storing: (1) one field of information; and (2) the other locations within the system where copies of the cell are located; where the information in every cell is copies the same number of times throughout the system</p>
<p>“first means for storing at least one complete file, [each file including a plurality of individual pieces, the pieces containing parts of the files]”</p> <p>[’680 Patent, Claims 5, 6]</p>	<p><u>Function:</u> storing at least one complete file</p> <p><u>Structure:</u> Indefinite</p>
<p>“the first data storage means”</p> <p>[’680 Patent, Claim 5]</p>	<p><u>Function:</u> data storage</p> <p><u>Structure:</u> Indefinite</p>
<p>“computer unit”</p> <p>[’521 Patent, Claims 1, 4, 11, 12, 14, 15, 21, 22, 30, 33, 40, 41, 43; ’680 Patent, Claims 1-4, 7, 8, 10, 11, 13, 14; and ’125 Patent, claims 1, 2, 6, 8, 9, 13]</p>	<p>No construction necessary</p>
<p>“prespecified parameters of the data transmission” / “prespecified parameters” / “prespecified parameters for data transmission” / “prespecified parameters of data transmission” / “predetermined parameters [for data transmissions]”</p> <p>[’521 Patent, Claims 1, 15, 30, 43 and ’125 Patent, Claims 4-7, 11-14]</p>	<p>“prespecified” and “predetermined” are indefinite</p> <p>Remainder of claim terms: duration of transmission, fault rate, duration of data processing operations of individual data storage means prior to transmission, transmission quality, transmission rate, computing performance, network performance, or other performance measures</p>

Term/Phrase	Court's Construction
<p>“data transmission performance”</p> <p>[’680 Patent, Claims 1, 3, 5, 7, 8, 10, 11, 13, 14 and ’125 Patent, Claims 1, 2, 8, 9]</p>	<p>duration of transmission, fault rate, duration of data processing operations of individual data storage means prior to transmission, transmission quality, transmission rate, computing performance, network performance, or other performance measures</p>
<p>“means for detecting prespecified parameters of the data transmission between the data storage means and the computer unit [with the data being preferably stored in a redundant manner in the data storage means as a function of said detected prespecified parameters, and with the computer unit accessing one of the data storage means as a function of said prespecified parameters] ”</p> <p>[’521 Patent, Claim 1]</p>	<p>Function: detecting prespecified parameters of the data transmission between the data storage means and the computer unit</p> <p>Structure: A network of computers programmed to perform the following algorithm:</p> <ol style="list-style-type: none"> 1. Storing data fields in cells depending on determined parameters of data transmission, wherein data in cells are stored in two or more storage locations at the same time depending on the parameters. 2. Determining or checking the cell's applicable parameters of data transmission with other cells using and in response to at least one of: <ul style="list-style-type: none"> (a) pseudoreliable messages; (b) find operation; (c) read operation; (d) write operation; (e) mirror operation; and (f) shift operation. 3. Wherein said determining or checking occurs periodically based on time intervals or subsequent to specified actions. 4. Accessing the store data based upon the determined parameters of data transmission.

Term/Phrase	Court's Construction
<p>“[the data storage means comprising] second means for detecting prespecified parameters for data transmissions between said data storage means”</p> <p>[’521 Patent, Claim 1]</p>	<p>Function: detecting prespecified parameters of the data transmission between the data storage means and the computer unit</p> <p>Structure: A network of computers programmed to perform the following algorithm: 1. Storing data fields in cells depending on determined parameters of data transmission, wherein data in cells are stored in two or more storage locations at the same time depending on the parameters. 2. Determining or checking the cell’s applicable parameters of data transmission with other cells using and in response to at least one of: (a) pseudoreliable messages; (b) find operation; (c) read operation; (d) write operation; (e) mirror operation; and (f) shift operation. 3. Wherein said determining or checking occurs periodically based on time intervals or subsequent to specified actions. 4. Accessing the store data based upon the determined parameters of data transmission.</p>
<p>“controller to enable data transmission between the data storage units and the computer unit”</p> <p>[’680 Patent, Claims 1, 3]</p>	<p>A device that other devices rely on to enable data transmission between the data storage units and the computer unit.</p>
<p>“control means for enabling data transmission between the second data storage means and the first means”</p> <p>[’680 Patent, Claim 5]</p>	<p>Function: enabling data transmission between the second data storage means and the first means</p> <p>Structure: a computer programmed to issue copy, shift, read, write or mirror commands</p>
<p>“preferably”</p> <p>[’521 Patent, Claim1]</p>	<p>with preference to</p>

Term/Phrase	Court's Construction
<p>“a set of instructions for . . . receiving, in the at least one data storage device, [at least one piece of data/a second piece of data] stored by [a/the at least one] stored by [a/the at least one] computer unit in a redundant manner in at least two data storage devices as a function of a measured data storage device and the at least one computer unit ”</p> <p>[’125 Patent, Claims 1, 2, 8, 9]</p>	<p>No construction necessary</p>
<p>“[performing an action] as a function of [the prespecified parameters/predetermined parameters/data transmission performance]” or “[performing an action] based on [the prespecified parameters/predetermined parameters/data transmission performance]”</p> <p>[’521 Patent, Claims 1, 30; ’680 Patent, Claims 1, 3, 5, 7, 8, 10, 11, 13, 14; and ’125 Patent, Claims 1, 2, 8, 9]</p>	<p>No construction necessary</p>
<p>“the data storage units copy pieces that are redundantly stored in the system from one of the data storage units to another of the data storage units independently of an access of the computer unit based on the data transmission performance between the data storage units”</p> <p>[’680 Patent, Claims 1, 3]</p>	<p>No construction necessary</p>
<p>“copies data which is redundantly stored in the system independent of an access of the computer unit as a function of the detected prespecified parameters of data transmission between the data storage means”</p> <p>[’521 Patent, Claim 1]</p>	<p>copies data which is stored in two or more data storage means at the same time without depending on the access of the computer unit</p>

Term/Phrase	Court's Construction
<p>“the second data storage means copy pieces that are redundantly stored in the system from one of the second data storage means to another of the second data storage means independently of an access of the first data storage means based on the measured data transmission performance between the second data storage means ”</p> <p>[’680 Patent, Claim 5]</p>	<p>No construction necessary</p>
<p>“send[ing] from the [at least one] data storage device to the other data storage device a copy of the received [second] piece of data for redundant storage independently of an access of the computer unit as a function of the measured data transmission performance between the data storage devices”</p> <p>[’680 Patent, Claims 7, 8, 10, 11, 13, 14 and ’125 Patent, Claims 1, 2, 8, 9]</p>	<p>No construction necessary</p>
<p>“user”</p> <p>[’521 and ’125 Patents]</p>	<p>a computer or a component of a computer system</p>
<p>“data transmission means [for a data transmission between the data storage means and the computer unit”</p> <p>[’521 Patent]</p>	<p>Function: data transmission</p> <p>Structure: electrically conductive connections; bus systems; networks; wired or wireless (mobile) telephone networks; the Internet</p>
<p>“shifting”</p> <p>[’521 Patent]</p>	<p>data is copied to a new location and no longer available at one of the previous locations</p>

Term/Phrase	Court's Construction
“shifting redundantly stored data independent of an access of the computer unit as a function of the determined prespecified parameters of data transmission”	No construction necessary
[’521 Patent]	
“data stored . . . in a redundant manner”/ “piece . . . stored . . . in a redundant manner” [’521 ’680, and ’125 Patents]	existing in two or more data storage means at the same time

IV. Conclusion

For the above reasons, the court construes the disputed claims as noted and so **ORDERS**.

No other claim terms require construction.

Defendants' motions for relief for Plaintiffs' violation of the scheduling order allege that Defendants were unduly prejudiced by Plaintiffs' withholding of proposed constructions until service of rebuttal-expert reports. Plaintiffs reply that Defendants failed to respond to the rebuttal-expert report, arguing that Defendants have not been prejudiced as they have had ample time to consider and argue against all of Plaintiffs' proposed claim constructions. The court notes that all claim-construction filings have been timely filed and thoroughly briefed, indicating that all parties have been able to meet the court's scheduling-order deadlines. Therefore, having determined all issues regarding claims construction before the court at this time, the court will deny Defendants' motion seeking relief for Plaintiffs' alleged violations of the scheduling order, including Plaintiffs' revision of proposed claim constructions through rebuttal-expert reports. Accordingly,

IT IS FURTHER ORDERED that Defendants' Opposed Motion for Relief Due to Plaintiffs' Violations of the Scheduling Order filed December 2, 2015 in Cause Nos. 1:14-CV-810-LY (Doc. #53) and 1:14-CV-813-LY (Doc. #52) and December 3, 2015 in Cause No. 1:14-CV-808-LY (Doc. #47) is **DENIED**.

IT IS FURTHER ORDERED that this case is set for a **Scheduling Conference** on **October 31, 2016, at 9:30 a.m.**, in Courtroom 7, Seventh Floor, United States Courthouse, 501 W. 5th Street, Austin, Texas 78701. The parties shall meet and confer in advance of that date in an attempt to settle this case. If the case is not settled, the parties shall confer in an attempt to reach agreement on a schedule to follow for the remainder of this case. The court will render a scheduling order as a result of the conference.

SIGNED this 20th day of September, 2016.


LEE YEAKEL
UNITED STATES DISTRICT JUDGE